

THE HISTORY OF THE
CITY OF BOSTON
FROM 1630 TO 1800

"HARTFORD-SAXONY" RUGS

MADE IN AMERICA
FOR PRIVATE HOMES AND PUBLIC PLACES



Bigelow-Hartford Carpet Company

ESTABLISHED 1825

Mills at Thompsonville, Conn., and Clinton, Mass.

NEW YORK
385 Madison Ave.

CHICAGO
14 E. Jackson Blvd.

BOSTON
69 Summer St.

SAN FRANCISCO
770 Mission St.

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"HARTFORD-SAXONY" RUGS

MADE IN AMERICA

HE Bigelow-Hartford Carpet Company has been manufacturing floor coverings for nearly a century, and is now the largest producer of high-grade rugs and carpets in the United States of America, and one of the largest in the world. Of course, it must be perfectly obvious to everyone that a concern, to have continued at the head of its industry for so long a period of time, must have been constantly devoting its chief attention and energies to manufacturing goods of intrinsic merit, and have kept as its goal superiority of quality.

In the great mills of this company are produced many different kinds of rugs and carpets, that have earned a national reputation for high quality, unexcelled beauty and remarkable durability. Preeminent among these stands the "Hartford-Saxony."

To those who may not be familiar with the "Hartford-Saxony" fabric, this monograph will endeavor to present briefly, and in such language as one unacquainted with the carpet industry can comprehend, some facts relating to its manufacture. It is hoped that these facts will enable the reader to understand the reason for the merit of this rug of sterling quality—a rug that fears no wear—and that they will instil a desire to become more intimately acquainted with this really wonderful, American-made, loom-tufted fabric.

Design and Coloring

The prime essential in a rug is beauty. True it is that the value of a rug is judged by its inherent quality and its ability to endure hard service, but the impulse to purchase a rug comes first from a desire for its beauty as a decorative element. Its object is to impart to a



*The first step
is to make
the design.*

room an atmosphere of warmth and welcome, as well as to render a softness to the tread.

First, also, in the manufacture of a rug, come these things which give beauty—the design and the coloring. To produce

anything one first must have a plan, and in rug making the plan is the design.

This design is the work of an artist, but as it is to be a guide controlling the various processes of manufacture, the artist must paint his picture so as to show the position and color of each individual tuft of wool as it will appear in the finished rug.

Rug designs are made on large sheets of paper specially ruled into little oblongs, called "checks," each of which represents a tuft of wool in the fabric. In these checks the artist paints the colors that are to form his pattern.

When the design is finished and has been approved, it is sent to the "colorist," the man who selects the

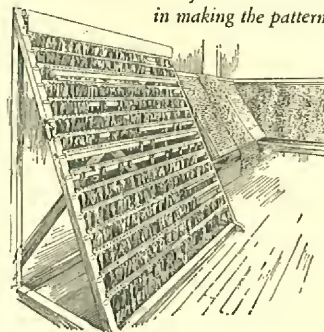
colors and shades of yarn that are to compose the pattern. Hanging on a large rack are hundreds of little clusters of yarn, each dyed a different color or shade. Often the variation in hue between several of these little clusters scarcely will be perceptible, but each really is slightly different from its neighbor and bears its individual color number.

Now that our design has been made and the colors selected, we are ready to think of the raw materials from which to make the rug. These first steps have settled the question of beauty—now we must consider the quality and durability of the wool.

Cleaning and Blending the Wool

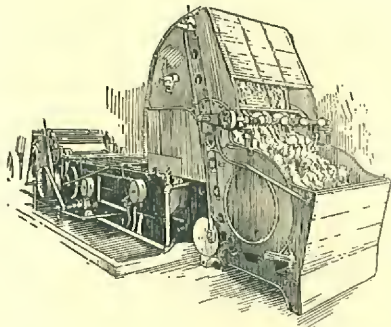
Many carpet mills buy their yarn. But in the Bigelow-Hartford carpet mills raw wool is received in the great iron-strapped bales in which it is packed in China, India, South America, Russia, Scotland, Persia, and other foreign countries.

*Rack from which the colorist
selects shades of wool to be used
in making the pattern.*





This "Hartford-Saxony" rug and a stair carpet to match, in a typical Saraband pattern with all-over field of small pine cones, impart an atmosphere of blended dignity, welcome and cheer to this entrance hall.



When the imported bales are opened, this machine "breaks" apart and loosens the tightly compressed wool, and drops it into the washer, at the back, to be scoured.

or tear, the wool apart. Then the loosened bunches are dropped into a "washer," in which long wooden fingers keep swashing and turning the wool around in a hot, soapy solution that dissolves the animal fats, separates and scours the fibres.

After this scouring the water is squeezed out and the wool dried by warm air, when it is ready for the blending. Wools from different parts of the world vary greatly in quality. The yarn used in a "Hartford-Saxony" rug is made from a mixture of several kinds of wool. Some are more resilient than others, some have a finer lustre, others are noted for their long

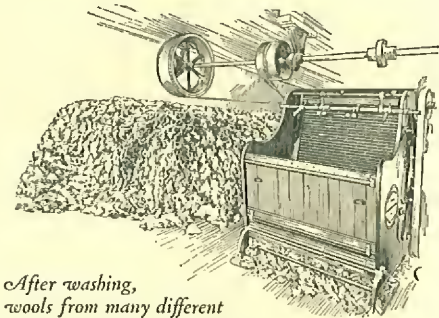
As the bales are opened, the wool is tossed into a huge machine called a "breaker," which has a continuous belt from which pins project and pick up the wool, while large steel fingers pull the other way, and break

fibre. The wool blend for the "Hartford-Saxony" fabric is entirely different from that used in any other rug we weave. When the proportions are fixed, the different kinds of wool are placed in great piles and gradually fed into a machine called a "picker."

Making the Yarn

The blended wool now passes into a "carding" machine, which literally pulls every fibre loose and almost straight.

This "carding" machine is a large drum—literally a vast pin cushion with millions of pin points sticking out to grasp the wool—over which revolve, in an opposite direction, several smaller rollers also composed of a vast number of pin points. On one of these smaller rollers the points will be tipped slightly downwards, and on the next slightly upwards, each pulling from the

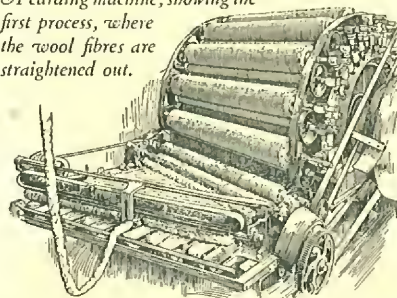


After washing, wools from many different countries are fed into this "wool picker" and thoroughly mixed together to form the special blend used for "Hartford-Saxony" rugs.



"Hartford-Saxony" rug. Reproduction of an 18th Century Sarook design. On a mellow cream background, the Tree of Life is interspersed with trees and flowers, emblematic of the period.

A carding machine, showing the first process, where the wool fibres are straightened out.



large drum tiny fibres of the wool and passing them on to the next roller, to be pulled apart still further and straightened. When these fibres reach the

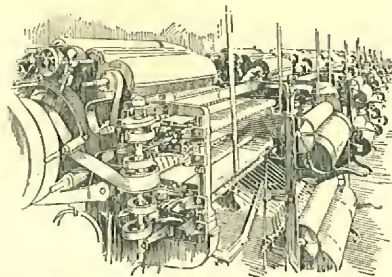
last roller they are drawn off in straight, untwisted streams, called "roving," each a trifle thinner than a lead pencil, and wound on large spools about three feet wide. After three or four other machines have drawn the roving still thinner, the spools are placed on spinning machines, known as "spinning mules." The front of the "mule" moves away from the spools, drawing the roving out several feet. The roving is then rapidly vibrated, or "spun," and wound up on spindles.

The spun strands are now only a third of the thickness of the finished yarn used in a "Hartford-Saxony" rug. The "cops," as these spindles are called, are placed on a "twisting frame" so that the strands from each set of three "cops" will pass through an eye and around a peculiarly shaped wheel which twists the three strands into a three-ply yarn.

Dyeing the Yarn

Dyeing is now required to make the yarn ready for the loom. This would seem to be a simple operation—merely to dip skeins of yarn into dye vats and leave them there a certain time. But, really, dyeing is a wonderfully important process, requiring a wealth of knowledge. Some wools take the dye better than others. Some dyes must be used only with condensed steam; others must be started in cold water and brought to a boil to make them absolutely fast. Many dyes are composed of several different colors, and a few grains too much, or little, of any one of them would produce an effect entirely different from that desired. Furthermore, the dyes themselves may vary in quality, and every batch is carefully and rigidly tested in the chemical laboratory.

But, with the dyeing completed, we are ready to begin weaving.

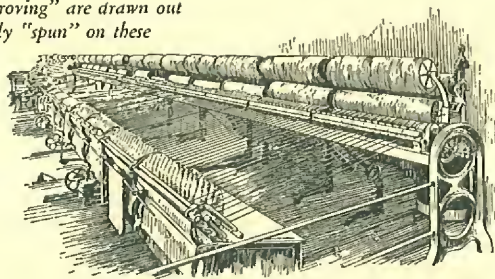


The final process, where the carded wool is drawn out into soft, thin strands, called "roving."



A delightfully restful living-room, in which the various elements of decoration are brought into quiet harmony, by means of a "Hartford-Saxony" rug in self-color 'Jaspe' effect with laurel leaf band border. This pattern is made also in other self-colors.

Several feet of the "roving" are drawn out at a time and rapidly "spun" on these machines called "spinning mules," then wound on spindles, known as "cops."



The "Hartford-Saxony" Loom

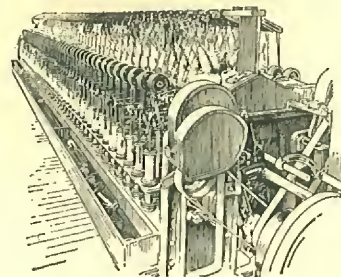
A "Hartford-Saxony" loom is shown on page fifteen. It is a typical Wilton loom, with the Jacquard attachment overhead, and, at the rear, the five large racks, or "frames," which hold hundreds of spools of yarn. From these five frames come what is practically five layers of woolen strands. The equivalent of one of these layers is found in the upstanding pile that forms the surface of the rug; the other four are buried in the back, and form a portion of the body of the fabric.

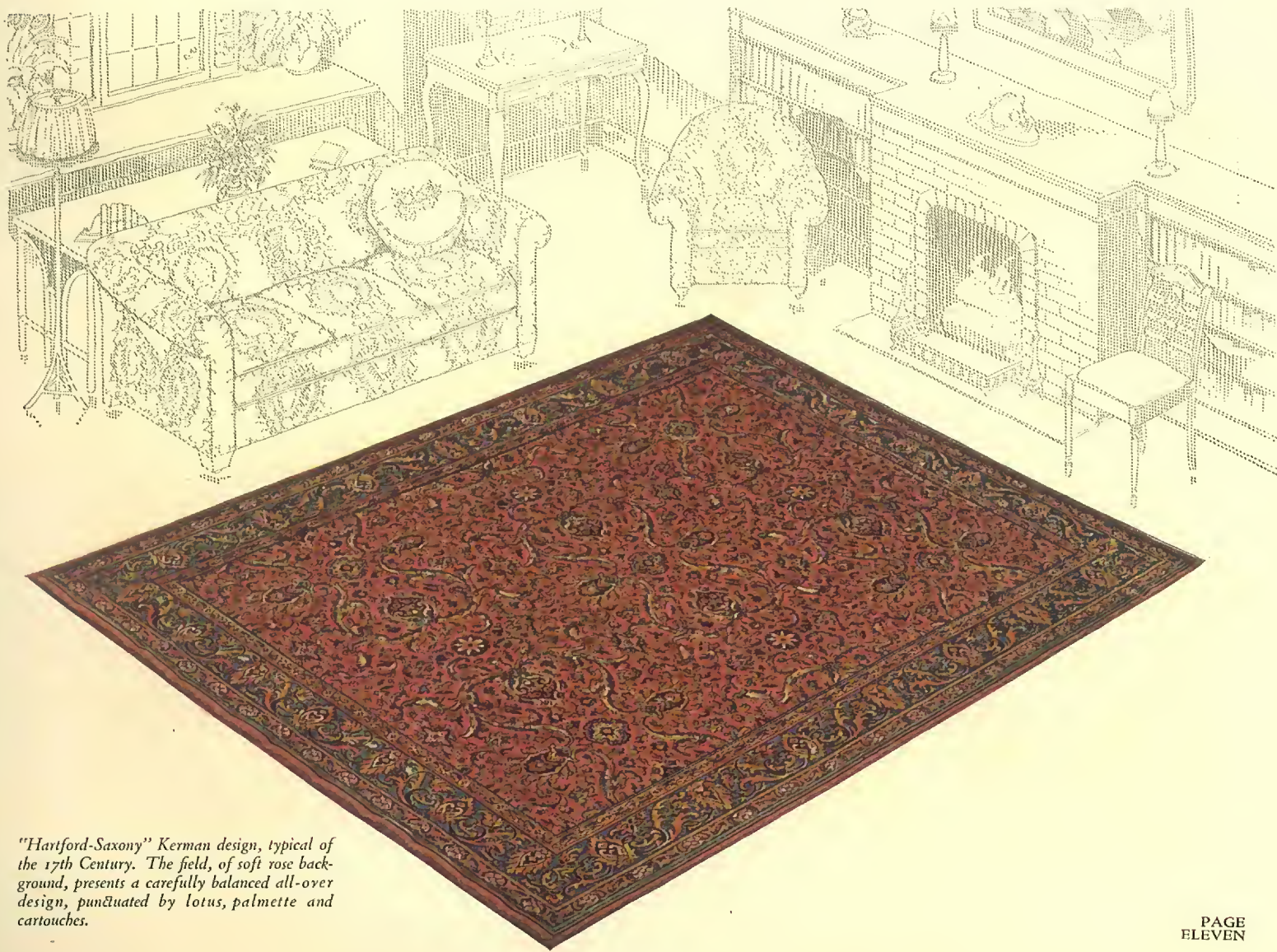
How the Pattern is Formed

Now we come to the reason why the artist, in making the design mentioned on page four, painted his colors in little oblongs, or "checks." Each check painted on the design represents a spool of wool yarn in the

corresponding color frame at the back of the loom. As the strands of yarn from these spools pass forward through the loom to produce the rug, some must be raised above the others, to form the pattern. The device which controls this is a sort of slatted chain of what are called "cards." These can be seen in the picture, draped over the upper part of the loom. Each card is perforated with a great many holes. The position of these holes on the cards governs the position and color of every tuft of wool that is to appear in the pattern of the rug. When the holes are all cut, the cards are laced together to form a chain that very much resembles the music roll of a player-piano and, in fact, has much the same function. When these cards are placed in position at the top of the loom, long needles come against them and, by passing through the holes, or being stopped by the cards where there are no holes, operate a mechanism which raises some

Threads from each set of three "cops" are twisted together to form the three-ply yarn used in making "Hartford-Saxony" rugs.





"Hartford-Saxony" Kerman design, typical of the 17th Century. The field, of soft rose background, presents a carefully balanced all-over design, punctuated by lotus, palmette and cartouches.

of the strands of colored wool and lowers the others. The strands that are raised form the pattern on the surface of the rug.

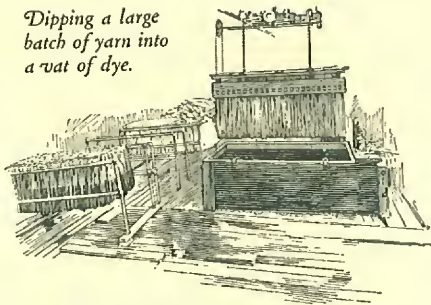
Weaving "Hartford-Saxony"

When the strands that are to show in the surface in a single row across the rug are raised, a long, flat wire, just the height of the pile, is inserted between these and the lower strands. Then the upper strands are dropped behind the wire, and the shuttle throws across them a "binder" thread, which holds them in a tight loop over the wire.

In weaving, about twenty wires are used, one behind the other, each covered by loops of strands that later are going to form the pile of the rug. The end of each of these wires is formed into a little razor-like knife of peculiar shape, so that, as the front wire is withdrawn, it slits the top of each loop and leaves a double row of fuzzy tufts.

Deep in the body of a "Hartford-Saxony" rug, is a cotton "stuffer" and a heavy cotton binder, adding

Dipping a large batch of yarn into a vat of dye.



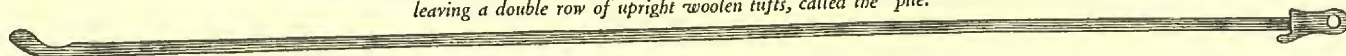
softness to the body of the rug and making it lie flat. They also act as a sort of lining to the woolen body of the rug.

If you will turn a "Hartford-Saxony" rug over on its face, you will see threads of a neutral color running across the back of the rug. These are the lower binder threads, and the blue threads crossing them are part of the cotton "chain" that runs up and down through the body of the fabric and "ties" all the different strands in place.

The illustration at the bottom of page fourteen shows the actual thickness of a piece of "Hartford-Saxony" fabric. If you will examine this carefully, you will see, first, the woolen pile; then, the ends of the upper binder threads, the four buried strands of wool yarn running in the back, the cotton "stuffer," and the ends of the lower binder threads.

Have you observed that not a word has been said about a jute back or filler? That is because there

The sharp edge on the inside of the point at the left, slits the loops, as the wire is withdrawn, leaving a double row of upright woolen tufts, called the "pile."





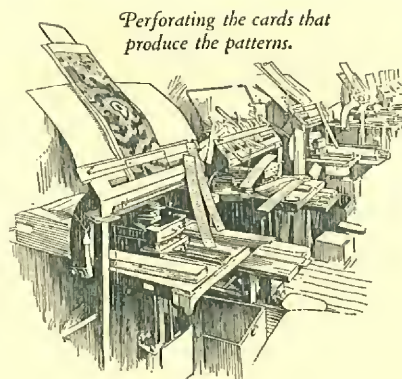
The lobby of this hotel, with Georgian period decoration, is made very rich and striking by these large "Hartford-Saxony" rugs, in an antique Chinese design of the 18th Century Ming period.

isn't any. Jute can never equal fine wool or cotton in softness or wearing quality, and not a particle of jute ever finds its way into any "Hartford-Saxony" fabric.

While you have that "Hartford-Saxony" rug turned over, there is something else on the back that you should particularly observe. That is the name, "Hartford-Saxony," woven in white. Every genuine "Hartford-Saxony" rug has the name woven in the back, and when you find it in the rug you buy, you can be sure you have obtained the utmost in beauty, quality and wearing ability.

Finishing the Rugs

There still is much to do to our rug before it is ready for shipment. When the long wires with the sharp knife-ends were withdrawn, slitting the loops of



yarn, they left a rough, fuzzy edge where some of the tiny fibres were pulled up. So, when the fabric is taken from the loom, it is "steamed" to untwist the ends of the tufts in the pile and to make the loose fibres stand straight up, and then passed through a "shearing" machine.

This first carefully brushes the tufts of the pile upwards, and then passes the fabric under a roller, formed into a spiral knife, which rapidly rotates over the surface of the pile, shearing off the ends of the tufts evenly. The process is very similar to that of gently raking up trampled down grass, and then running over it with a lawn mower.

A "Hartford-Saxony" rug is sheared two, three, or even more times, until the tops of the tufts are made quite even, and all loose fibres trimmed off.

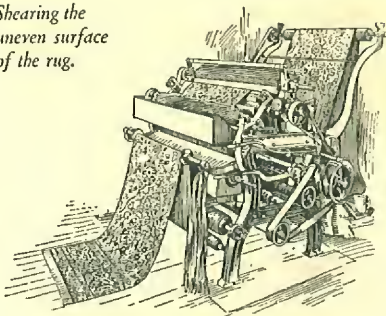
Here we have cut through a length of "Hartford-Saxony" rug to show the actual height of the pile and thickness of the back. See how the colors, when they leave the "pile," run along the back and come to the surface further on.





A typical "Hartford-Saxony" loom, for weaving rugs and carpets of 27 inch width. Looms for weaving wider rugs are larger in proportion.

Shearing the uneven surface of the rug.



In the inspection room the rugs are placed on wooden frames and left for a time sufficient to form them to the proper dimensions evenly. When taken from the frames

each rug is carefully examined for even the slightest irregularity. As at each previous operation also it has been carefully inspected, usually there is little left for this final inspection, but whatever is not absolutely perfect is sure to be found at this most rigid examination. Any rug that is passed on for packing is quite worthy to go into the world bearing in its back the mark of quality and integrity—the name “Hartford-Saxony.”

This is not a new fabric on the market, unknown and untried. “Hartford-Saxony” rugs have been manufactured continuously for over twenty years.

“Hartford-Saxony” rugs are the highest achievement of rug-weaving in America and are such peers among floor coverings that they grace the public rooms of

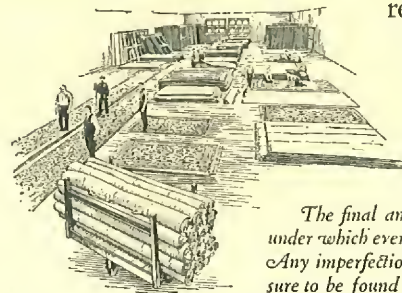
hundreds of hotels in the United States. No rug ever has to endure a more severe service than those in our great hotels, where thousands of feet daily pass to and fro, pressing down and wearing upon the sturdy, resilient fibres almost constantly. Yet, “Hartford-Saxony” rugs successfully withstand this extraordinary wear for years, and in thousands of private homes they have given the most faithful service.

While “Hartford-Saxony” rugs are worthy adornments for any setting, this is a fabric particularly adapted to use in rooms in public places, and for household use wherever the floor coverings are subjected to severe wear.

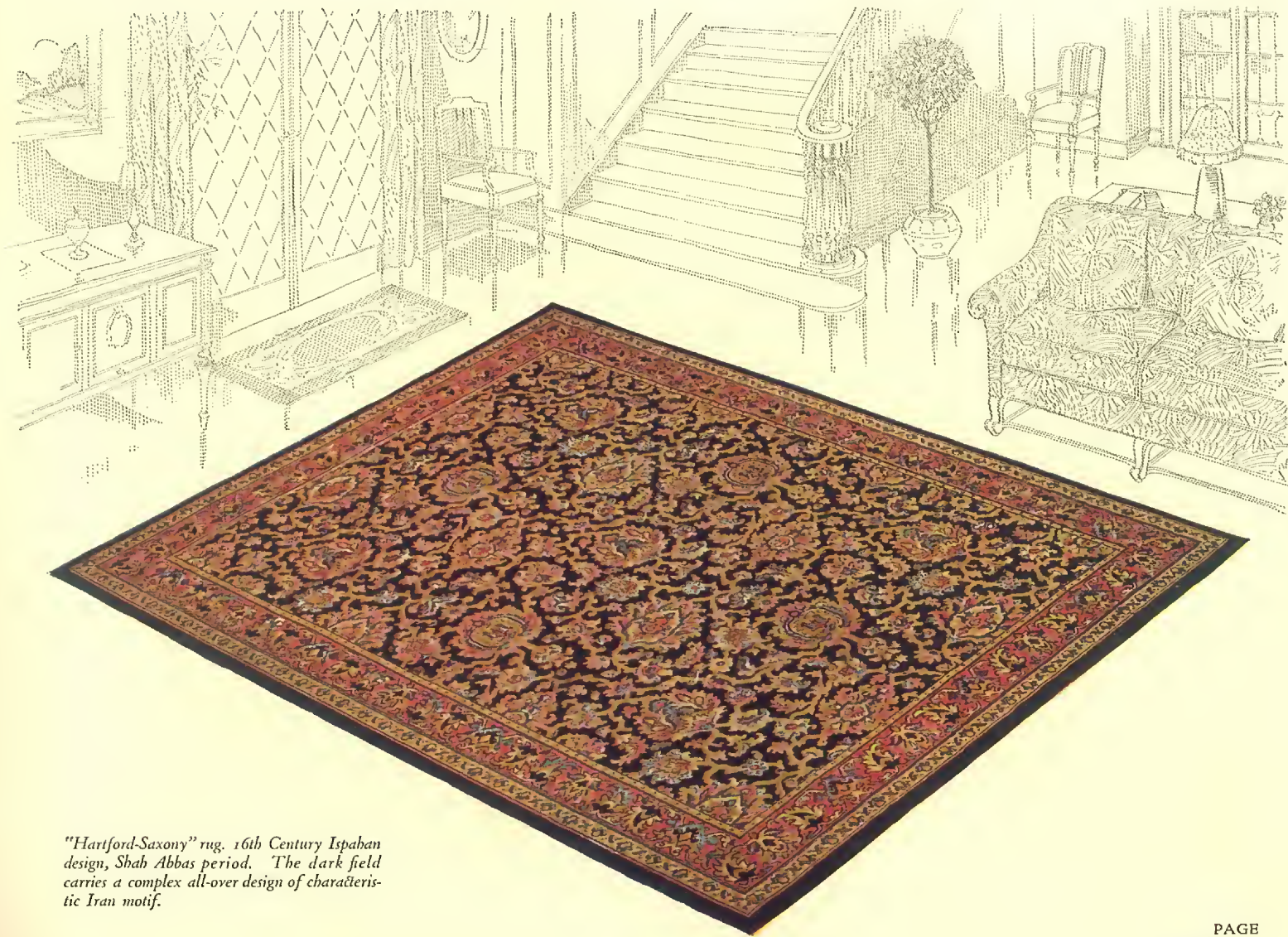
Wide Variety in Design and Coloring

Though we have taken much space to show the

reason for the remarkable durability of “Hartford-Saxony” rugs, it is not to be inferred that beauty



The final and most rigid of the five inspections under which every “Hartford-Saxony” rug must pass. Any imperfection or irregularity, however small, is sure to be found here, if not before.



"Hartford-Saxony" rug, 16th Century Ispahan design, Shah Abbas period. The dark field carries a complex all-over design of characteristic Iran motif.

has been neglected. In the "Hartford-Saxony" line there is a wide variety of beautiful patterns and colorings in modern designs and self-colored effects, as well as reproductions of Oriental motifs taken from world-famous rugs in National Museums both here and abroad.

Rugs and Runners

"Hartford-Saxony" rugs are made in the following stock sizes:

22½" x 36"	3' x 9'	9' x 21'
2'3" x 3'	3' x 12'	9' x 24'
2'3" x 4'6"	3' x 15'	10'6" x 12'
3' x 3'	4'6" x 7'6"	10'6" x 13'6"
3' x 5'3"	6' x 9'	11'3" x 12'
3' x 6'	6'9" x 9'	11'3" x 15'
2'3" x 9'	8'3" x 10'6"	11'3" x 18'
2'3" x 12'	9' x 12'	11'3" x 21'
2'3" x 15'	9' x 15'	11'3" x 24'
	9' x 18'	

In addition to these stock sizes, "Hartford-Saxony" rugs are made in special sizes to order.

Stair Carpets (Rolls)

2'3" wide (¾)	4'6" wide (¾)
3' wide (¾)	6' wide (¾)

Plain Carpets

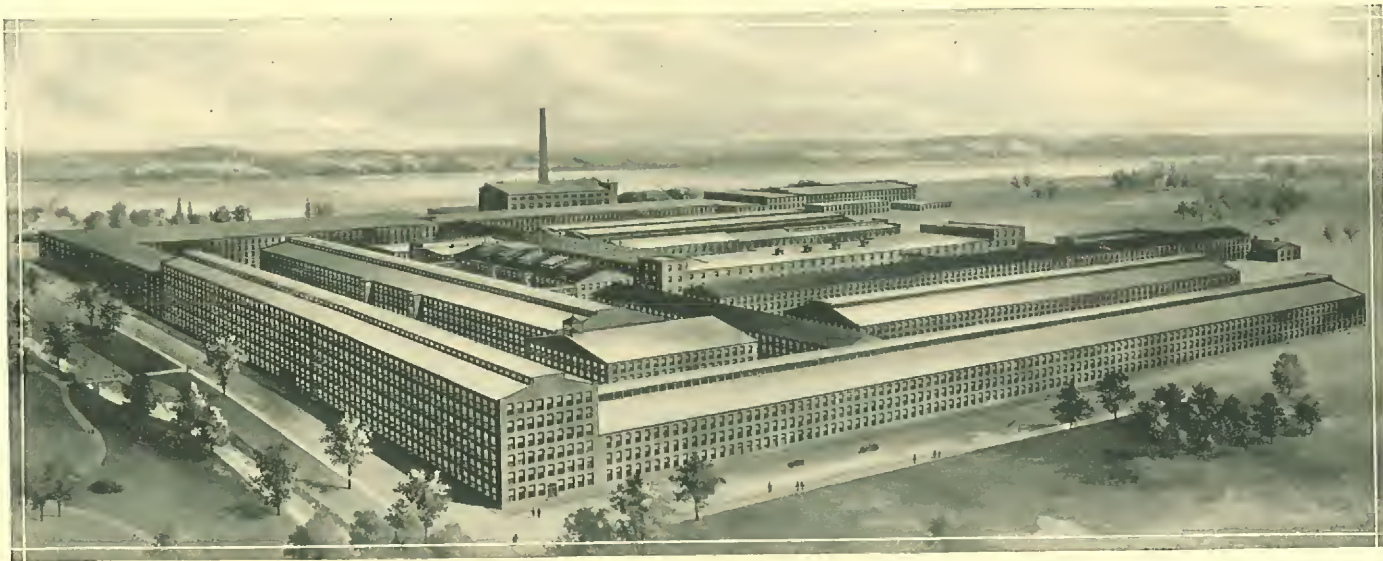
In addition to a varied range of patterns, "Hartford-Saxony" carpets are made in the following plain colors:

Brown	Sand (2 shades)	Rose
Light Tan	Mole	Burgundy
Soft Tan	Tete-de-Negre	Red
Taupe	Natural Gray	Yale Blue
Rose Taupe	Mulberry (2 shades)	Dark Blue
Mouse	Rose Mulberry	Mid-Blue
Beaver	Scarlet	Navy Blue
	Medium Blue (2 shades)	Hunter Green
	Cathedral Green	Olive Green (2 shades)

If you have any difficulty in procuring "Hartford-Saxony" rugs, and will communicate with us, we will see that you are supplied by the dealer nearest to your home, who does carry them.



The Lounge of a men's club, where the air of informality and elegance is enhanced by these "Harford-Saxony" rugs, as well as by the colorful 17th Century Ispahan pattern.



The Bigelow-Hartford mills at Thompsonville, Conn., where "Hartford-Saxony" rugs and carpets are made, contain over 1,600,000 square feet of floor space, and have a capacity to produce annually over 10,000,000 yards of carpets and rugs, in many different grades.

At Clinton, Mass., the Company has other mills with a total of

828,000 square feet of floor space and an annual production of over 2,500,000 yards of very fine grade fabrics.

The magnitude of these plants is in itself a tribute to the quality of their productions, for only by constantly maintaining the worthiness of the goods manufactured is it possible to bring together an organization and equipment of this size.



